

REMARKS

As a preliminary matter, the undersigned would like to thank the Examiner for the courtesy extended during a telephonic interview on February 4, 2009 to discuss the claims and cited reference to Suh. Reconsideration and further examination of the subject patent application in light of the present Amendment and Remarks is respectfully requested. Claims 1-25 are currently pending in the application and stand rejected. No new matter has been added.

Rejection Under 35 U.S.C. §102

Claims 1, 2, 7-9, 13, 14, and 19-21 stand rejected under 35 U.S.C. §102 as being anticipated by Suh (2003/0219244). In view of the remarks, applicant respectfully traverses this rejection.

Applicant has amended independent claims 1 and 25 to more clearly point out that the movement of the lens frame relative to the chassis accomplishes a focusing operation, where the interaction of the multiple-diameter hanger shaft and the hanger shaft hole permit such focusing to occur. This is supported throughout the specification, for example at paragraphs 0007, 0009, 0023, 0026, 0029-0031, and many other paragraphs.

As a review, applicant's claimed lens structure includes a lens 16 and a lens frame 17, which supports the lens. The lens frame 17 includes hanger shaft hole 19. A chassis 3 includes an integrally formed hanger shaft 12. The hanger shaft 12 fits into the hanger shaft hole 19 to support the lens frame 17 so that the lens frame can reciprocally move relative to the chassis, which accomplishes the focusing operation. The hanger shaft 12 has a plurality of outside diameters (Figs. 4-7) which correspond to inside diameters in the hanger shaft hole. Thus, the hanger shaft 12 having multiple outside diameters, fits within the hanger shaft hole 19 having corresponding multiple inside diameters, and permits movement of the lens frame 17, and hence

the lens itself 16, to achieve proper focusing of the lens. When the lens frame 17 moves (along the optical axis) relative to the chassis, the hanger shaft moves guideingly within the hanger shaft hole. Thus, hanger shaft essentially “guides” the lens frame via the hanger shaft hole as the focusing operation is performed.

The Examiner cites the primary reference to Suh as having all of the elements of claim 1 (and with variation, independent claim 25). However, applicant submits that Suh is missing both the multi-diameter shaft and a corresponding multi-diameter hole, which permits the lens frame to reciprocally move along the optical axis where the hanger shaft moves guideingly within the hanger shaft hole. Even if the Examiner disagrees with the above characterization, the Suh reference is missing any form of reciprocal movement between a shaft and shaft hole during a focusing operation, which is now recited in the independent claim as amended.

In contrast, Suh does not teach or suggest a multi-diameter shaft and corresponding aperture to effect a focusing operation. Rather, in Suh, rotational movement of a barrel causes a cam follower to create axial movement of the lens assembly. Although Suh discloses two shafts, the only structure in Suh that moves relative to another structure is the 2nd lens barrel 79, and this structure is guided by two shafts 81, which have a uniform diameter, not a multi-diameter configuration.

Accordingly, applicant respectfully submits that Suh is completely missing applicant's claimed feature of a hanger shaft having a plurality of diameters, and where the hanger shaft moves guideingly within the hanger shaft hole when the lens frame moves relative to the chassis to perform a focusing operation. Because these elements are completely missing in Suh, applicant submits that Suh cannot anticipate applicant's claimed invention. Applicant further

submits that the dependent claims are allowable as depending from allowable base claims, respectively.

Rejection Under 35 U.S.C. §103

Claims 1-24 stand rejected under 35 U.S.C. §103 as being unpatentable over Suh in view of various combinations to Tereda (2005/0185951), Hayakawa (7,206,109), Johnson (5,861,564), and Kanno (5,712,734). In view of the remarks, applicant respectfully traverses this rejection. Applicant reasserts the above argument set forth under §102 to traverse the rejection under §103. None of the cited secondary references provide the elements missing from Suh, such as the guide shafts having multiple diameters and the corresponding hanger shaft hole that permit two structures to move relative to each other in a guidingly manner during a focusing operation. Combining Suh, which lacks any teaching or suggestion of guide shafts having multiple diameters and the corresponding hanger shaft holes, with any of the secondary references, which similarly lack such teaching or suggestion, fails to yield applicant's claimed invention. Accordingly, applicant submits that the cited references, either individually or in combination, do not render applicant's claimed invention obvious.

Summary

Pending claims 1-25 are believed to be patentable. Applicant respectfully requests the Examiner grant early allowance of this application. The Examiner is invited to contact the undersigned attorneys for the applicant via telephone if such communication would expedite this application.

Respectfully submitted,

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